REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and following remarks.

Claim 1 has been amended as supported by, for example, paragraphs [0043] and [0046] of the specification, and to recite the limitations of claim 8. Claim 8 has been canceled without prejudice or disclaimer.

Prior Art Rejections

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Araki et al. (JP 2000-299). Applicants respectfully traverse this rejection.

Claim 1 is directed to an apparatus in which the height of the adjusting liquid tank is variable. When the height of the adjusting liquid tank is changed, an amount of the adjusting liquid stored in the volume adjusting chamber is varied based on a difference in height between the adjusting liquid tank and the volume adjusting chamber.

Araki does not disclose a structure that moves the adjusting liquid by a difference in height of the structure. Arika discloses a structure in which the adjusting liquid is moved by a pump. Therefore, Arika does not teach or suggest every element of claim 1 and claim 1 is not anticipated by Arika. Applicants respectfully request that the rejection be withdrawn.

Obviousness Rejections

Claims 4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al. (JP 2000-299). Applicants respectfully traverse this rejection.

Claims 4, 6 and 7 are allowable at least by virtue of their dependence on independent claim 1. The rejections of these claims should be withdrawn. Applicants are not conceding the correctness of the rejections.

Claims 2, 3, 5, and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al. (JP 2000-299) in view of Marx (US patent 4,573,992). Applicants respectfully traverse this rejection.

Claims 2, 3 and 5 are allowable at least by virtue of their dependence on independent claim 1. The rejections of these claims should be withdrawn. Applicants are not conceding the correctness of the rejections.

Claim 9 claims a closed-type venous reservoir comprising a first blockade avoiding channel forming a space bulging outward that is provided on an inner wall surface of the housing at a part facing the blood storage chamber. The inflow port and the outflow port are disposed so as to communicate with the first blockade avoiding channel. This feature prevents the outflow port from being blocked by the septum member when blood flows into the blood storage chamber. When blood flows into the blood storage chamber, the septum member is pushed by the flow and is freely deformed due to its flexibility, so that a force may cause the septum member to be sucked into the outflow port. However, since the first blockade avoiding channel is provided along the housing, the septum member is supported by the inner wall surface of the housing around the first blockade avoiding channel. Therefore, the outflow port is prevented from being blocked by the septum member, and a space around the outflow port is formed by the first blockade avoiding channel allowing blood to flow therethrough (paragraph [0042]). Neither Araki nor Marx disclose or suggest these features.

Araki merely discloses a blood reservoir 3 provided with a pressure control chamber 17, a blood chamber, and a flexible septum 18. As mentioned in the rejection, Araki fails to disclose a blockage avoiding channel within the blood storage container, as required by claim 9.

Marx merely discloses a rigid outer container 11 and an inner deformable container 12 (col. 8, lines 6-12) with a closed space 16 between the two structures (col. 8, lines 35-37). The inner deformable container 12 has openings in each end that are fitted to the inflow and outflow nozzles of the rigid outer container 11 by a welding operation (col. 8, lines 23-27). Based on the location of the nozzles and the inner deformable container 12, it is inherent that the container 12 cannot occlude the ports. The rejection thus erroneously interprets the nozzle areas as bulges for the purpose of preventing the occlusion of the nozzles. Additionally, the purpose of the closed space 16 is to act as the receptacle for a means of pressure which results in the pressure being applied to the outside of the inner deformable container 12, thereby applying pressure to the blood

within the container 12 and feeding the blood to the patient (col. 9, lines 49-55). The closed space 16 is not a structure and is not provided within the reservoir for the specific purpose of preventing the blockage of the outflow ports. Therefore, the inflow port and the outflow port are not disposed so as to communicate with the closed space 16 and Marx fails to teach the first blockade avoiding channel and so never teaches the disposition of the inflow port and the outflow port in relation to the first blockade avoiding channel.

Even if a person skilled in the art combines the above references, the structure of claim 9 cannot be achieved. Modifying the reservoir disclosed by Araki with the container as disclosed in Marx does not provide the advantage of the first blockade avoiding channel as in claim 9. Applicants respectfully request that the rejection of claim 9 be withdrawn.

Claims 10-14 are allowable at least by virtue of their dependence on independent claim 9. The rejections of these claims should be withdrawn. Applicant is not conceding the correctness of the rejections.

Claims 15-18 and 20 are rejected under 35 U.S.C. 103(a)as being unpatentable over Araki et al. (JP 2000-299) in view of Marx (US patent 4,573,992) and further in view of Magram (US patent 5,683,357). Applicants respectfully traverse this rejection.

Claim 15 claims an extracorporeal blood circulating method comprising adjusting a filling amount of the adjusting liquid in the volume adjusting chamber by adjusting a height of the adjusting liquid tank with respect to the closed-type venous reservoir so that the blood storage chamber has a blood storage capacity appropriate for priming before starting the extracorporeal blood circulation. It is therefore possible to stably maintain and precisely adjust the volume of the blood storage chamber based on a flow of the adjusting liquid that is varied in accordance with the positioning in height of the adjusting liquid tank. For reasons discussed above for claim 1, Araki does not disclose or suggest this feature. For the reasons discussed above for claim 9, Marx also does not disclose or suggest this feature.

In addition, according to the features of claim 15, measuring of the volume of the blood storage chamber is easily accomplished based on an amount of the adjusting liquid

stored in the adjusting liquid tank. The amount of the adjusting liquid in the adjusting liquid tank corresponds to the volume of the volume adjusting chamber which corresponds to the volume of the blood storage chamber. A change in the capacity of the blood storage chamber can be determined from a change in the known volume of the volume adjusting chamber. The change of the volume of the volume adjusting chamber can be measured by a change of an amount of the adjusting liquid in the adjusting liquid tank. Thus, the volume of the blood storage chamber can be preformed based on direct measurement of a volume in the adjusting liquid tank.

In the apparatus of Araki, the volume of the blood storage chamber is measured based on a discharge amount or pressure of the pump. Measurement of volume in this manner is difficult to operate and can result in imprecise measurements when compared with the direct measurement method discussed above.

Magram also neither discloses nor suggests this feature. Magram discloses a device for draining cerebrospinal fluid from a patient. A fluid collector is used for collecting fluid drained from a patient through an accumulator. Therefore, the device of Magram does not function to supply a patient with any liquid, which is different from the adjusting liquid tank of the present invention that supplies the venous reservoir with the adjusting liquid. Therefore, Magram never suggests using the fluid collector for stably maintaining the volume of the blood storage chamber by controlling the height of the adjusting liquid tank.

Therefore, Magrain does not remedy the deficiencies of Araki and Marx and the applicants respectfully request that the rejection be withdrawn.

Claims 16-18 and 20 are allowable at least by virtue of their dependence on independent claim 15. The rejections of these claims should be withdrawn. Applicants are not conceding the correctness of the rejections.

S/N 10/581732

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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